

Patent

Attorney's Docket No. 002010-746

SEP 11 2003  
O I P E J C I O S E  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of )

S. A. RUBEN et al. )

Application No.: 09/010,377 )

Filed: January 21, 1998 )

For: TREATMENT OF VIRAL )  
ENCEPHALITIS BY AGENTS )  
BLOCKING ALPHA-VLA-4 INTEGRIN )  
FUNCTION )

Group Art Unit: 1644

Examiner: Phillip Gambel, Ph.D.

Confirmation No.: 8602

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**THIRD**  
**INFORMATION DISCLOSURE STATEMENT**

**MAIL STOP RCE**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Customer No. **21839**

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, applicants hereby submit the following information in conformance with 37 C.F.R. §§ 1.97 and 1.98.

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.

The information is submitted before the mailing of a first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. § 1.114. Continued examination is requested and the fee required under 37 C.F.R. § 1.17(e) accompanies the present submission.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner-initialed copy of this form be returned to the undersigned.

Respectfully submitted,

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Date: September 11, 2003

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Substitute for forms 1449A/PTO &amp; 1449B/PTO

# THIRD INFORMATION DISCLOSURE STATEMENT BY APPLICANT

ATTORNEY'S DKT No.  
002010-746APPLICATION No.  
09/010,377APPLICANT  
S.A. RUBEN et al.FILING DATE  
January 21, 1998GROUP  
1644

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## U.S. PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication (MM-DD-YYYY)

## FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation Yes No

## NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	YEDNOCK et al., "Prevention of experimental autoimmune encephalomyelitis by antibodies against $\alpha 4 \beta 1$ integrin," <i>Letters to Nature</i> , vol. 356, pp. 63-66 (1992).
	James S. GROBER et al., "Monocyte-Endothelial Adhesion in Chronic Rheumatoid Arthritis," <i>J. Clin. Invest.</i> vol. 91, pp. 2609-2619 (1993).
	S. JALKANEN et al., "A Novel Endothelial Cell Molecule Mediating Lymphocyte Binding in Humans," <i>Behring Inst. Mitt.</i> , No. 92, pp. 36-43 (1993).
	C. FISCHER et al., "Lymphocyte-Endothelial Interactions Inflamed Synovia: Involvement of Several Adhesion Molecules and Integrin Epitopes," <i>Scand. J. Immunol.</i> Vol. 38, pp. 158-166, (1993).
	Marko SALMI et al., "Dual Binding Capacity of Mucosal Immunoblasts to Mucosal and Synovial Endothelium in Humans: Dissection of the Molecular Mechanisms," <i>J. Exp. Med.</i> , vol. 181, pp. 137-149 (1995).
	Bernhard HOLZMANN et al., "Identification of a Murine Peyer's Patch-Specific Lymphocyte Homing Receptor as an Integrin Molecule with an $\alpha$ Chain Homologous to Human VLA- $\alpha 4$ ," <i>Cell</i> vol. 56, pp. 37-46 (1989).
	Andrew C. ISSEKUTZ et al., "Monocyte Migration to Arthritis in the Rat Utilizes both CD11/CD18 and Very Late Activation Antigen 4 Integrin Mechanisms," <i>J. Exp. Med.</i> vol. 181, pp. 1197-1203 (1995).
	Andrew C. ISSEKUTZ et al., "A Major Portion of Polymorphonuclear Leukocyte and T Lymphocyte Migration to Arthritic Joints in the Rat Is via LFA-1/MAC-1-Independent Mechanisms," <i>Clinical Immunology and Immunopathology</i> vol. 67, no. 3, pp. 257-263 (1993).
	Paul P. TAK, "Expression of Adhesion Molecules in Early Rheumatoid Synovial Tissue," <i>Clinical Immunology and Immunopathology</i> vol. 77, no. 3, pp. 236-242 (1995).
	Jo C W EDWARDS et al., "Vascular cell adhesion molecule 1 and $\alpha 4$ and $\beta 1$ integrins in lymphocyte aggregates in Sjögren's syndrome and rheumatoid arthritis," <i>Annals of the Rheumatic Diseases</i> vol. 52, pp. 806-811 (1993).
	ACHM van DINTHER-JANSSEN et al., "Role of the CS1 adhesion motif of fibronectin in T cell adhesion to synovial membrane and peripheral lymph node endothelium," <i>Annals of the Rheumatic Diseases</i> vol. 52, pp. 672-676 (1993).
	Hitoshi ISHIKAWA et al., "Adhesion molecules in the lymphoid cell distribution in rheumatoid synovial membrane," <i>Bulletin Hospital for Joint Diseases</i> vol. 53, no. 2, pp. 23-28 (1993).
	Jeanette MORALES-DUCRET et al., "Vascular Cell Adhesion Molecule-1 Expression in Synovium and on Fibroblast-Like Synoviocytes," <i>the Journal of Immunology</i> vol. 154, no. 4, pp. 1424-1431 (1995).
	Christopher W. MARLOR et al., "Rapid Communication Expression of Vascular Cell Adhesion Molecule-1 in Fibroblastlike Synoviocytes After Stimulation with Tumor Necrosis Factor," <i>American Journal of Pathology</i> vol. 140(5) pp. 1055-1059 (1992).
	Antonio A. POSTIGO et al., "Increased Binding of Synovial T Lymphocytes from Rheumatoid Arthritis to Endothelial-Leukocyte Adhesion Molecule-1 (ELAM-1) and Vascular Cell Adhesion Molecule-1 (VCAM-1)," <i>J. Clin. Invest.</i> vol. 89, pp. 1445-1452 (1992).
	Anna C.H.M. van DINTHER-JANSSEN et al., "THE VLA-R/VCAM-1 PATHWAY IS INVOLVED IN LYMPHOCYTE ADHESION TO ENDOTHELIUM IN RHEUMATOID SYNOVIUM," <i>The Journal of Immunology</i> vol. 147, no. 12, pp. 4207-4210 (1991).
	Thomas B. ISSEKUTZ et al., "T Lymphocyte Migration to Arthritic Joints and Dermal Inflammation in the Rat: Differing Migration Patterns and the Involvement of VLA-4," <i>Clinical Immunology and Immunopathology</i> vol. 61, pp. 436-447 (1991).
	Armando LAFFON et al., "Unregulated Expression and Function of VLA-4 Fibronectin Receptors on Human activated T Cells in Rheumatoid Arthritis," <i>J. Clin. Invest.</i> vol. 88, pp. 546-552 (1991).
	Thomas B. ISSEKUTZ et al., "Inhibition of In Vivo Lymphocyte Migration to Inflammation and Homing to Lymphoid Tissues by the TA-2 Monoclonal Antibody," vol. 147, no. 12, pp. 4178-4184 (1991).

Examiner Signature	Date Considered
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.